

PERMIT APPLICATION: NRS #04-439

APPLICANT: Wal-Mart Stores, Inc.
702 S.W. 8TH Street
Bentonville, AR 72716-0550
(479) 273-4000

LOCATION: Project is located at the northeast intersection of Highway 76 Bypass and Highway 19 West; Brownsville; Haywood County.

WATERSHED DESCRIPTION: Surrounding land use is agricultural and light residential. The proposed wetland to be impacted is isolated in an open field. No other waters of the state exist on the property.

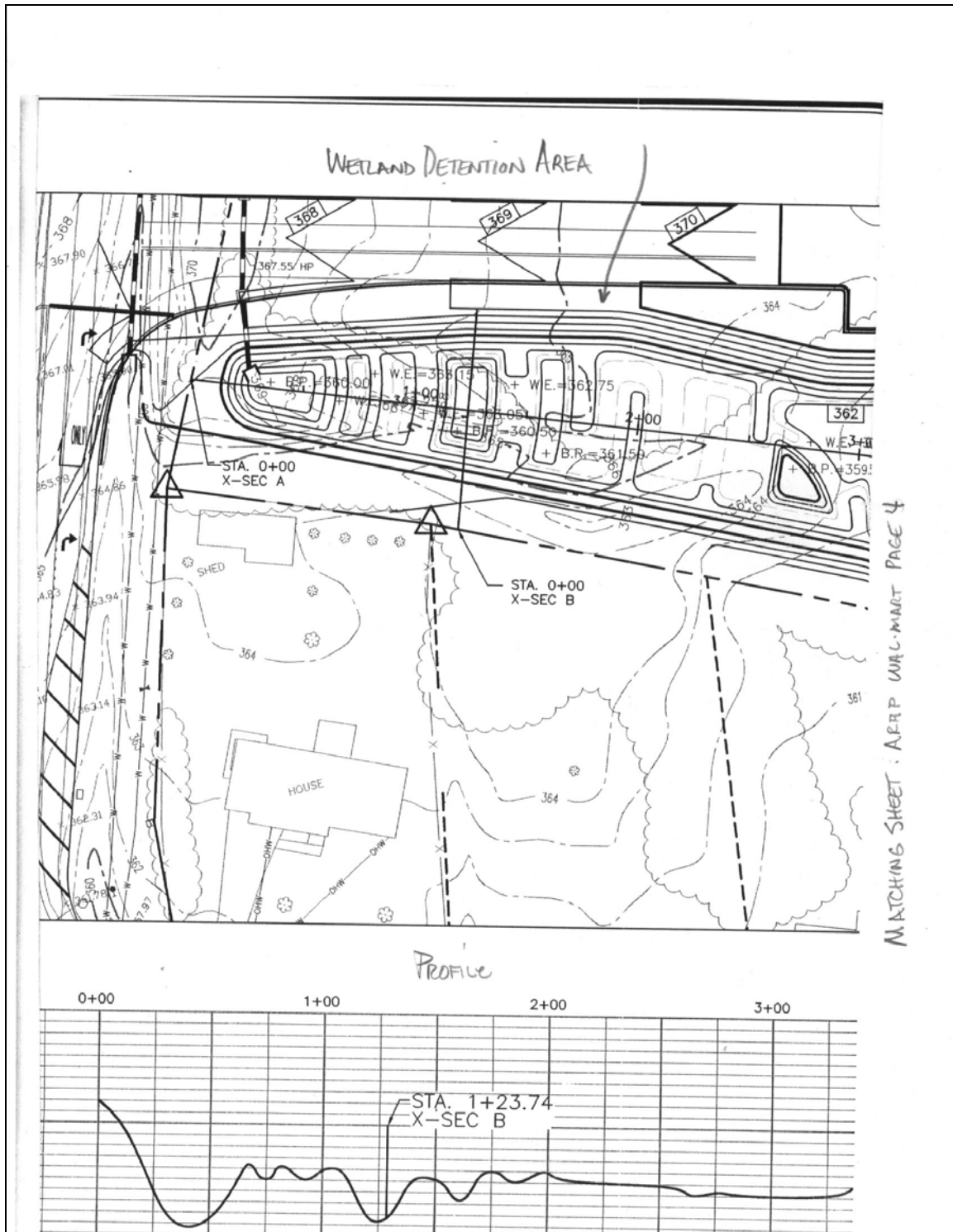
PROJECT DESCRIPTION: The applicant proposes to construct a Wal-Mart Supercenter at the above location. The construction of the facility will require the placement of fill in 0.4 acres of jurisdictional wetland. Compensatory wetland mitigation will occur onsite with the creation of 1.7 acres. A wetland detention pond is proposed that involves a sinuous bottom with varying depths and multiple plantings.

PERMIT COORDINATOR: Mike Lee

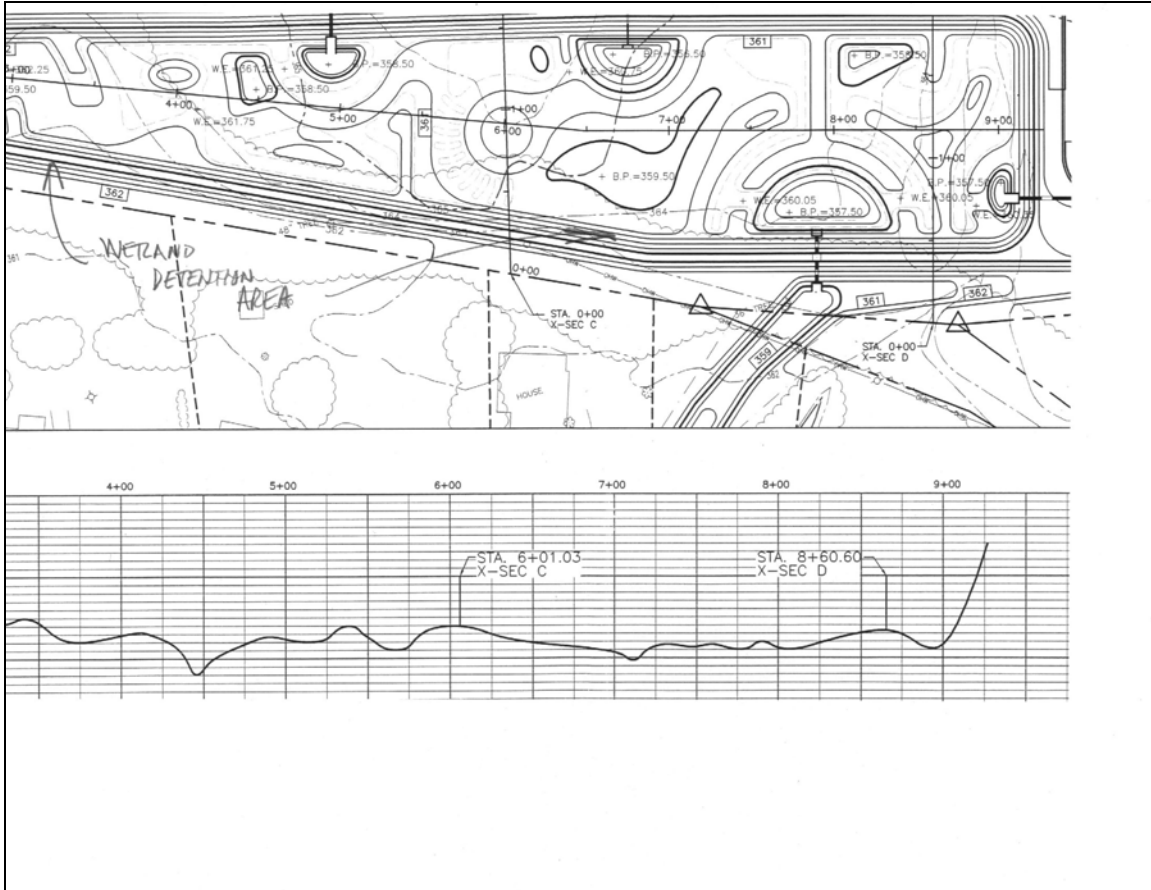
TOPOGRAPHICAL QUADRANGLE: Brownsville 422-SE
Sunnyhill 430 SW



USGS QUADRANGLE MAP
SCALE: 1" = 3/4 MILE



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Wetland Mitigation And Water Quality Information

A wetland detention pond is utilized to provide detention, improve stormwater quality and to mitigate the impacts to an existing 0.4-acre wetland that was removed during construction. The floor of the southern (1.70 acre) basin has been designed with several physical features to aid in the removal of contaminants and to improve the water quality. There are deep pools at the inlets surrounded by masses of horsetail. These serve as initial sediment basins, screening the stormwater as it enters the wetland basin system. The stormwater passes through multiple segments where the floor of the basin is "wash boarded." This feature provides two (2) benefits. It provides additional pockets for sediment deposits and the minimal depth areas maximize the overall percentage of the water flow at the surface for oxygenation. Finally, as the stormwater moves along the sinuous, winding pond bottom and through the wetland plantings, the flow is slowed to maximize the amount of contact time that the water, oils and sediments have with the leaf blades of the plants. This extended exposure time increases the sediment and contaminant removal.

The plant materials to be used in the detention basin were specifically selected for their survivability in the designed setting, their availability in the marketplace and the capability to remove pollutants from the stormwater. Seven of the nine species to be planted are grasses (refer to the landscape plan and wetlands plan for these types). They were selected to cover the floor of the basin because of the amount of leaf blade surface area. The other two materials selected are varieties of Horsetail. Horsetail has long been known to have the ability to remove heavy metals from water. The two species of horsetail were chosen due to ones preference for moist soils and the others preference for standing water.

With the construction of the diversity in the floor of the wetland basin, the placement of the listed wetland plantings and the installation of erosion control measures during construction; the sediment, contaminants and the impact to downstream sites will be greatly reduced while exceeding the required four-to-one (4:1) wetland mitigation ratio.

SYM.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	CONDITION	REMARKS
ET BASIN PLANTS:						
	EQUISETUM ARVENSE	FIELD HORSETAIL	TUBERS	18" o.c.	ROOT STOCK	EQUAL % OF ALL SEED MATERIAL 99% PURE - 99% GERM RATE PLANT @ DEPTH OF 3" - 4"
	EQUISETUM FLUVATILE	SWAMP HORSETAIL	TUBERS	18" o.c.	ROOT STOCK	
ET BASIN SEED MIX:						
	AGROSTIS ALBA	REDDTOP	MIX 32#/ Ac.	2 lbs./Ac.	SEED MIX	EQUAL % OF ALL SEED MATERIAL 99% PURE - 99% GERM RATE
	AGROSTIS STOLONIFERA	CREEPING BENTGRASS	MIX 32#/ Ac.	2 lbs./Ac.	SEED MIX	
	CAREX VULPINOIDEA	FOX SEDGE	MIX 32#/ Ac.	2 lbs./Ac.	SEED MIX	
	ELYMUS RIPARIUS	RIVERBANK WILDRYE	MIX 32#/ Ac.	2 lbs./Ac.	SEED MIX	
	PANICUM VIRGATUM	SWITCHGRASS	MIX 32#/ Ac.	10 lbs./Ac.	SEED MIX	
	PHALARIS MINORINASEA	REED CANARYGRASS	MIX 32#/ Ac.	8 lbs./Ac.	SEED MIX	
	PUCCINELLIA DISTANS	ALKALI GRASS	MIX 32#/ Ac.	8 lbs./Ac.	SEED MIX	